AMENDMENT

In the Claims:

The following listing reflects amendments to the claims and replaces all prior versions and listings of claims in this application.

1. (Previously presented) A method for transducing a cerebellar neuron, said method comprising:

(a) providing a lentiviral vector particle, wherein said viral particle is produced from a lentiviral vector comprising a 5' lentiviral LTR, a tRNA binding site, a packaging signal, a promoter operably linked to a polynucleotide encoding a protein of interest, an origin of second strand DNA synthesis and a 3' lentiviral LTR; and

(b) administering said lentiviral vector particle to the cerebellar neuron under conditions whereby the protein encoded by the polynucleotide is expressed to produce a transduced cerebellar neuron.

2. (Original) The method of claim 1, wherein said lentiviral vector comprises 5' and/or 3' LTRs from a virus selected from the group consisting of HIV, HIV-1, HIV-2, FIV and SIV.

3. (Original) The method of claim 2, wherein said lentiviral vector comprises 5' and/or 3' LTRs from FIV.

4. CANCELLED

5. (Previously presented) The method of claim 1, wherein said cerebellar neuron is a Purkinje cell.

6. (Previously presented) The method of claim 1, wherein said cerebellar neuron is transduced *in vivo* in a vertebrate subject in need of treatment of a disease that causes cerebellar degeneration.

7. (Previously presented) The method of claim 1, wherein said cerebellar neuron is transduced *ex vivo* and the transduced neuron is introduced into a vertebrate subject in need of treatment of a disease that causes cerebellar degeneration.

8. CANCELLED

9. CANCELLED

10. CANCELLED

11. (Original) A method for transducing cerebellar neurons comprising:

(a) providing an FIV vector particle, wherein said viral particle is produced from an FIV vector comprising a 5' FIV LTR, a tRNA binding site, a packaging signal, a polynucleotide encoding a protein of interest operably linked to an FIV LTR promoter or a promoter element, an origin of second strand DNA synthesis and a 3' FIV LTR; and

(b) administering said FIV vector particle to a cerebellar neuron under conditions whereby the protein encoded by the polynucleotide is expressed to produce a transduced cerebellar neuron.

12. (Original) The method of claim 11, wherein the promoter is a CMV, RSV or SV40 promoter.

13. (Original) The method of claim 11, wherein said cerebellar neuron is transduced *in vivo* in a vertebrate subject in need of treatment of a disease that causes cerebellar degeneration.

14. (Original) The method of claim 11, wherein said cerebellar neuron is transduced *ex vivo* and the transduced cerebellar neuron is introduced into a vertebrate subject in need of treatment of a disease that causes cerebellar degeneration.

15. CANCELLED

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19. (Currently amended) A method of treating or preventing cerebellar neuronal degeneration in a vertebrate subject, comprising administering to a cerebellar lobe of the subject a lentiviral particle, wherein said lentiviral particle is produced from a lentiviral vector comprising a 5' lentiviral LTR, a tRNA binding site, a packaging signal, a promoter operably linked to a polynucleotide encoding a protein of interest, an origin of second strand DNA synthesis and a 3' lentiviral LTR, thereby treating or preventing cerebellar neuronal degeneration in the subject.

20. (Currently amended) A method of treating or preventing cerebellar neuronal degeneration in a vertebrate subject, comprising administering to Purkinje cells of the subject an FIV vector particle, wherein said vector particles is produced from an FIV vector comprising a 5' FIV LTR, a tRNA binding site, a packaging signal, a polynucleotide encoding a protein of interest operably linked to an FIV LTR promoter or a promoter element, an origin of second strand DNA synthesis and a 3' FIV LTR, thereby treating or preventing cerebellar neuronal degeneration in the subject.

21. (Currently amended) A method of treating or preventing a central nervous system disorder in a vertebrate subject, comprising administering to a cerebellar lobe of the subject a lentiviral vector particle, wherein said vector particle is produced from a lentiviral vector comprising a 5' lentiviral LTR, a tRNA binding site, a packaging signal, a promoter operably linked to a polynucleotide encoding a protein of interest, an origin of second strand DNA synthesis and a 3' lentiviral LTR, thereby treating or preventing the central nervous system disorder in the subject.

22. CANCELLED